

IN THE CLAIMS:

Please cancel claims 1-13 without prejudice.

The following listing of claims will replace all prior versions and/or listings of claims in the application:

Listing of Claims:

1-13 (cancelled).

14. (previously presented) A method, comprising:

forming a thin layer of thermal silicon oxide along the walls of an active area of a semiconductor device and forming a thin layer of thermal silicon oxide along the walls and bottoms of shallow trenches laterally adjacent to the active area;

depositing silicon oxide into the shallow trenches;

irradiating the silicon oxide in the shallow trenches with short wavelength light to densify the silicon oxide;

forming a thin oxide gate layer on the active area; and

depositing a gate onto the thin oxide gate layer, wherein the gate overlaps the shallow trenches.

15. (previously presented) The method of claim 14, further comprising irradiating the silicon oxide in the shallow trenches with light at a wavelength less than or equal to 200 nm, with a number of photons per cm² greater than 10¹⁹, and an energy at least equal to 9 eV.

16. (previously presented) The method of claim 14, wherein the wavelength of the light is approximately 100 nm.

17. (previously presented) The method of claim 14, wherein irradiating the silicon oxide inhibits the formation of corner areas in the active areas.
18. (previously presented) The method of claim 14, further comprising irradiating the silicon oxide in the shallow trenches such that the silicon oxide in the shallow trenches has a density close to the density of the thermal silicon oxide.
19. (previously presented) The method of claim 14, wherein the silicon oxide layer is deposited in the trenches using a chemical vapor deposition (CVD) process.